

REMARKS

The present application has been carefully studied and amended in view of the outstanding Office Action dated March 24, 2005, and reconsideration of that Action is requested in view of the following comments.

Claim 1 has been amended to address the informality noted in the Office Action.

Applicant respectfully submits that the vehicle wheel of claim 1 is not disclosed or suggested by the prior art taken alone or in combination with one another. Specifically, the detailed structural components recited in claim 1 are not rendered obvious by the combination of Wei US 5,988,763 and Cochran et al US 6,354,667 ("Cochran"), for the following reasons.

As recited in claim 1, the outboard edge of the rim 12 of the vehicle wheel 10 comprises a radially in-turned rim flange portion 30 extending circumferentially continuously around the rim edge adjacent the rim outboard bead seat. The rim flange portion 30 has serrations 32 on the outboard side thereof, and these serrations engage the outer peripheral portion of the disc 14. A continuous weld 16 is provided between the radially in-turned rim flange portion 30 and the outer peripheral portion of the disc 14, and the weld 16 extends into at least some of the serrations 32 thereby securing the rim 12 and disc 14 together.

Applicant respectfully submits that these features of the present invention are totally unsuggested by the applied prior art. Instead, Wei shows a rim 81 with a circumferential bead 83 that extends in a radially outward direction. Bead 83 fits within a circumferential groove 84 in disc 80 to thereby connect the disc and rim together.

Resilient sealant material 85 is positioned between the disc and rim. The above described features are shown in Figure 5 of Wei.

Wei Figure 6 shows a modification where the circumferential bead is modified so that it comprises a circular array of spaced apart bead segments 86. The groove 84 is also modified to include groove segments 87 that receive the bead segments 86. As such, the bead and groove segments produce a tight interlocking fit between the disc 80 and the rim 81.

Applicant submits that the embodiment of Figure 6 of Wei is devoid of any suggestion of serrations and instead simply shows tightly interlocking bead and groove segments. Also, these bead and groove segments interlock with one another in a radial direction whereas the serrations 32 of the present invention extend axially outwardly from a radially in-turned rim flange portion 30. In other words, the serrations 32 extend in a direction parallel to the axis of rotation of the wheel while the bead and groove segments of Wei extend in a transverse direction relative to the axis of rotation of the wheel.

Admittedly Cochran shows a weld 42 between rim 20 and wheel disc 30. This is shown in Figures 2 and 2A of Cochran as well as prior art Figure 11. However, Cochran fails to disclose or suggest the serrations specifically recited in claim 1. Any modification of Wei in view of Cochran might involve bead and groove segments between the rim and wheel disc, but such modification makes no sense when the bead and groove segments extend in a direction parallel to the axis of rotation of the wheel. Interlocking bead and groove segments only have validity when they extend in a radial

direction. Moreover, tight fitting and interlocking bead and groove segments leave no room for the weld to extend into at least some of the serrations as recited in claim 1. In this regard, applicant respectfully disagrees with the Examiner's conclusion that the bead and groove segments 86, 87 would receive at least a portion of the weld due to their location. However, regardless of location there is no room between these segments to receive a weld or any other material.

Moreover, if one modifies Wei to provide a radially in-turned portion, presumably that in-turned portion would include the interlocking bead and groove segments. However, as explained above such interlocking beads and grooves do no work in an axial direction, but only when they are radially oriented. Also, providing Wei with a radially in-turned portion requires total redesign of the disc 80 to include a complementary surface and no such redesign is suggested by the prior art.

As explained in the specification at paragraph 17, the serrations 32 function to provide an improved attachment weld 16 by allowing welding gases to flow and escape evenly, and weld splatter is eliminated or substantially reduced. Lateral runout of weld metal is reduced by the creation of high points at the serrations for leveling during welding. Machining is not necessary either before or after assembly, and wobble is eliminated between the rim and disc for improved mating of components.

With respect to dependent claims 2-4, Shimizu et al US 6,332,653 ("Shimizu") does not address the above described differences of the Wei/Cochran combination. Accordingly, the combination of Wei/Cochran/Shimizu does not suggest the subject matter of claims 2-4.

In summary, a fair reading of the applied prior art fails to suggest the invention as claimed. Only through prohibited hindsight is the Examiner able to formulate the stated rejection, and even then many of the claimed structural details are missing. In the absence of additional prior art of increased pertinency, it is clear that the present application is in condition for allowance and early notice to that effect is respectfully requested.

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